

Purem Abgassysteme GmbH & Co. KG

Patent Claims

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1. An exhaust gas aftertreatment system, especially for a diesel engine, having

- an exhaust gas particulate filter (3),
- a nitrogen oxide reduction catalytic converter (7, 8) connected downstream of the exhaust gas particulate filter (3), as seen in the direction of flow of the exhaust gas, and

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- an apparatus (17) for adding reducing agent, characterized in that the exhaust gas particulate filter (3) is designed as a porous cylindrical filter body having

- a substantially radial exhaust gas inflow direction into the filter body,
- a filter inner region (26) for filtered exhaust gas, and
- an axial exhaust gas outflow direction out of the filter inner region (26),

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and in that reducing agent is added into the filter inner region (26) via the apparatus (17) for adding reducing agent.

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2. The exhaust gas aftertreatment system as claimed in claim 1, characterized in that the filter body is formed by porous filter plate rings (4) which are combined in pairs.

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3. The exhaust gas aftertreatment system as claimed in claim 1 or 2, characterized in that the exhaust gas particulate filter (3) and the nitrogen oxide reduction catalytic converter (7, 8) are arranged in a common housing (2).

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4. The exhaust gas aftertreatment system as claimed in one of the preceding claims, characterized in that flow guiding means for passing on filtered exhaust gas to the nitrogen oxide reduction catalytic converter (7, 8) are provided, which flow guiding means comprise a collection manifold (6) led out of the filter inner region (26) of the filter body.

5. The exhaust gas aftertreatment system as claimed in claim 4, characterized in that a catalytic converter element (15, 16) is arranged in the collection manifold (6).

6. The exhaust gas aftertreatment system as claimed in claim 4 or 5, characterized in that the nitrogen oxide reduction catalytic converter (7; 8) is arranged axially parallel and adjacent to the collection manifold.

7. The exhaust gas aftertreatment system as claimed in one of the preceding claims, characterized in that an oxidation catalytic converter (5, 24, 25) is connected upstream of the exhaust gas particulate filter (3), as seen in the direction of flow of the exhaust gas.

8. The exhaust gas aftertreatment system as claimed in claim 7, characterized in that the exhaust gas particulate filter (3) and the oxidation catalytic converter (5, 24, 25) are arranged in a common housing (2).

9. The exhaust gas aftertreatment system as claimed in one of the preceding claims, characterized in that an exhaust gas recirculation line which is led out of the filter inner region (26) for branching off a part-stream of filtered exhaust gas upstream of the addition of reducing agent and for recirculating this

part-stream of filtered exhaust gas to the diesel engine is provided.